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09/395,206	09/14/1999	YEO NAM SOO	P-035	5611

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EXAMINER

NGUYEN, PHUONGCHAU BA

ART UNIT	PAPER NUMBER
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2665

DATE MAILED: 02/03/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/395,206

Applicant(s)

SOO ET AL.

Examiner

Phuongchau Ba Nguyen

Art Unit

2665

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10-28-03 amendment.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6, 8-11 and 16-20 is/are rejected.
- 7) ☒ Claim(s) 7 and 12-15 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

Claim Rejections – 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 1, 10–11 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The original disclosure does not found the new matter, “automatically”. Even there are function steps performed by main processor as claimed, but there is not found in the original disclosure that the main processor performing the function steps in claims 1, 10–11 automatically.

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 10 is not clear what is meant by "a matched last receiving board at a receiving side terminal". Claims 3, 11 and 19 also have the same problem as in claim 10.

Claim 3 recites the limitation "the board connected with the active path" in lines 4-5. Claim 1 recites the limitation "the entire interval" in line 8; Claim 16 (line 6) also has the same problem as in claim 1. Claim 1 recites the limitation "each board" in lines 5-6; claim 2, line 3 and claim 4, line 3 also have the same problem. There is insufficient antecedent basis for this limitation in the claim. Claims 2-9, 12-15, 17-18 & 20, are rejected as being depended on claims 1, 11, 16 respectively.

Claim Rejections – 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1–4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nagata (6,181,680) in view Kondo (6,442,131)

Regarding claim 1:

Nagata (6,181,680) discloses a switching system which includes a plurality of devices formed in a dual active structure, a device controller for controlling the devices, and a main processor, a path management and testing method for the switching system, comprising:

using the device controller to check a valid path and state change for each board, for forming a database using the main processor {col.3, lines 7–11, col.5, lines 53–61};

searching the database and confirming a standby path {col.3, lines 11–15, 62–64}; and

performing a path test for the entire interval or a certain interval with respect to the active or standby path {col.3, lines 43–47, col.6, lines 38–40; col.7, lines 48–52}.

Nagata does not explicitly the device controller functioning automatically. However, in the same field of endeavor, Kondo discloses transmit node (XC) transmitting the switching control OAM cells periodically on both of the operating virtual path and the standby virtual path {fig.3, col.2, lines 60–63}. Therefore, it would have been obvious to an artisan to apply Kondo's teaching to Nagata's system with the motivation being to selectively provide a protection of virtual paths in ATM network in case of failure detected.

Regarding claim 2:

Nagata further discloses wherein said forming a path state database for each board includes:

using the device controller to read a valid path for each board to a device at an initial state stage and inform the main processor of the read path {col.3, lines 13-15};

using the main processor to form a database using the read path {col.3, lines 13-15};

checking a device-based state change at a certain period {col.3, lines 43-47}; and

editing the database based on the state change {col.3, lines 9-15, 55-63}.

Regarding claim 3:

Nagata further discloses wherein when checking the active path, in which an active path to the matched last receiving board is checked by the receiving side terminal, and the active path is checked in the reverse direction of the data transmission direction {col.10, lines 10-15}, and the entire active paths are searched by checking the switching path of the boards connected with the active path {col.3, lines 9-15, 55-63}.

Regarding claim 4:

Nagata further discloses wherein in said standby path setting, in the case that a certain path is set as an active path which is different from the current path by checking the valid path for each board with respect to the standby path which is set as the reverse path of the active path, the set path is changed {col.7, lines 26-28, 48-55; col.10, lines 10-15}.

7. Claims 10-11, 16, 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Akiyoshi (5,715,237) over Kondo (6,442,131).

Regarding claim 10:

Akiyoshi (5,715,237) discloses a switching system of a dual active structure, an actual active path judging method, comprising:

checking an active path formed in a direction of a matched last receiving board at a receiving side terminal {sending OAM message on the trunk line $\phi 1$; col.17, lines 46-54; fig.1};

checking an active path in the reverse direction of a data transmission direction {col.18, lines 1-4; col.26, lines 21-23}; and

searching an entire active path by checking a switching path of the board connected to the active path {col.26, lines 23-45, fig.20}.

Akiyoshi does not explicitly checking active path step in a direction of matched last receiving board functioning automatically. However, in the same field of endeavor, Kondo discloses transmit node (XC) transmitting the switching control OAM cells periodically on both of the operating virtual path and the standby virtual path {fig.3, col.2, lines 60-63}. Therefore, it would have been obvious to an artisan to apply Kondo's teaching to Akiyoshi's system with the motivation being to selectively provide a protection of virtual paths in ATM network in case of failure detected.

Regarding claim 11:

Akiyoshi (5,715,237) discloses a switching system of a dual active structure, a standby path test method, comprising:

checking an active path formed in a direction of a matched last receiving board at a receiving side terminal {sending OAM message on the trunk line $\phi 1$; col.17, lines 46–54; fig.1},

checking an active path in the reverse direction of a data transmission direction {col.18, lines 1–4; col.26, lines 21–23}, and

searching an entire active path by checking a switching path of the board connected to the active path {col.26, lines 23–45, fig.20};

setting a reverse path of the active path as a standby path {col.29, lines 46–48}; and

performing a path test with respect to the set standby path {col.28, lines 52–67; fig.39, s1202; fig.40, s1301; fig.48, s1702–s1704; fig.49, s1801–s1803}.

Akiyoshi does not explicitly checking active path step in a direction of matched last receiving board functioning automatically. However, in the same field of endeavor, Kondo discloses transmit node (XC) transmitting the switching control OAM cells periodically on both of the operating virtual path and the standby virtual path {fig.3, col.2, lines 60–63}. Therefore, it would

have been obvious to an artisan to apply Kondo's teaching to Akiyoshi's system with the motivation being to selectively provide a protection of virtual paths in ATM network in case of failure detected.

Regarding claim 16:

Akiyoshi (5,715,237) discloses a path management and testing method for a switching system, comprising:

checking a valid path and state change for components within the switching system {col.28, lines 40-43};

searching for and confirming a standby path within the switching system {col.28, lines 40-43; col.25, lines 11-23}; and

performing a path test for the entire interval or a certain interval with respect to the active or standby path {step 0407; also fig.22}.

Akiyoshi does not explicitly checking valid path step functioning automatically. However, in the same field of endeavor, Kondo discloses transmit node (XC) transmitting the switching control OAM cells periodically on both of the operating virtual path and the standby virtual path {fig.3, col.2,

lines 60-63}. Therefore, it would have been obvious to an artisan to apply Kondo's teaching to Akiyoshi's system with the motivation being to selectively provide a protection of virtual paths in ATM network in case of failure detected.

Regarding claim 17:

Akiyoshi further discloses wherein the valid path and state change for each component is stored in a database {col.25, lines 11-23}.

Regarding claim 19:

Akiyoshi (5,715,237) discloses a path management and testing method for a switching system, comprising:

checking an active path formed in a direction of a matched last receiving device at a receiving location {col.28, lines 40-43};

checking an active path formed in a direction of a matched last receiving device at a receiving location {col.28, lines 40-43};

checking an active path in the reverse direction of a data transmission direction {col.28, lines 40-43; col.25, lines 11-23}; and

searching an entire active path by checking a switching path of the device connected to the active path {step 0404}.

Akiyoshi does not explicitly checking active path step in a direction of matched last receiving device functioning automatically. However, in the same field of endeavor, Kondo discloses transmit node (XC) transmitting the switching control OAM cells periodically on both of the operating virtual path and the standby virtual path {fig.3, col.2, lines 60-63}. Therefore, it would have been obvious to an artisan to apply Kondo's teaching to Akiyoshi's system with the motivation being to selectively provide a protection of virtual paths in ATM network in case of failure detected.

8. Claims 5-6, 8-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nagata (6,181,680) in view of Kondo (6,442,131) as applied to claim 1 above, and further in view Chen (5,659,540).

Regarding claim 5:

Nagata does not explicitly disclose the claimed features. However, in the same field of endeavor, Chen (5,659,540) discloses wherein said path test includes: receiving a parameter value used for a path test {col.5, lines 44-49}; forming a test path based on the parameter value {col.5, lines 44-49}; inserting a test pattern data into an input side device {col.5, lines 44-49}; extracting a test pattern data from an output side device {col.5, lines 50-52}; and judging an error with respect to the test path interval by comparing an input data and an extraction data {col.5, lines 50-52}. Therefore, it would have been obvious to an artisan to apply Chen's teaching to Nagata's system and the motivation being to identifying physical and OAM loopbacks.

Regarding claim 8:

Nagata does not explicitly disclose the claimed invention. However, in the same field of endeavor, Chen (5,659,540) discloses wherein said parameter value indicates the kind of a test path and a test type, a board for inserting or extracting a test pattern data, a subsystem in which the board is mounted, a

link number in the subsystem, and a pattern data used for the test {fig.1; col.2, line 51–col.3, line 24}. Therefore, it would have been obvious to an artisan to apply Chen's teaching to Nagata's system and the motivation being to recognizing a physical loopback during an OAM loopback test.

Regarding claims 6, 9:

Nagata does not explicitly disclose wherein said parameter value includes repeatedly performing a test by setting a number of repetitions and periods. However, in the same field of endeavor, Chen (5,659,540) discloses system 70 for programming the management processor to automatically repeat the loopback test by a number of timers selected by the user in the absence of a return cell being detected {col.6, lines 4–19}. Therefore, it would have been obvious to an artisan to apply Chen's teaching to Akiyoshi to provide retry capability of loopback test as if there is an error on the connection path which has not been yet detected.

9. Claims 18, 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Akiyoshi (5,715,237) in view of Kondo (6,442,131) as applied to claim 16 above, and further in view of Chen (5,659,540).

Regarding claims 18, 20:

Akiyoshi does not explicitly disclose repeatedly performing a test by setting a number of repetitions and periods. However, in the same field of endeavor, Chen (5,659,540) discloses system 70 for programming the management processor to automatically repeat the loopback test by a number of timers selected by the user in the absence of a return cell being detected {col.6, lines 4-19}. Therefore, it would have been obvious to an artisan to apply Chen's teaching to Akiyoshi to provide retry capability of loopback test as if there is an error on the connection path which has not been yet detected.

Allowable Subject Matter

10. Claim 7, 12-15 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

11. Applicant's arguments with respect to claims have been considered but are moot in view of the new ground(s) of rejection.

–Applicant's arguments filed 10–28–03 have been fully considered but they are not persuasive.

A/. Applicant argued Nagata does not teach using a device controller to check a valid path and state change for each board.

In reply, Nagata does teach using a device controller 40 to check a valid path and state change for each board by sending a OAM cell on the network {col.5, lines 53–61; col.6, lines 38–40; col.1, lines 24–29}.

B/. Applicant argued that Nagata does not teach searching the database and confirming standby path.

In reply, Nagata does teach the database (referred table, col.3, lines 57–59, 62–63) for storing all connections in the network (wherein the standby virtual path as being detected by OAM when OAM traveled between switch–nodes and confirming

standby path {col.3, lines 64–67, by selectively specify the leaf point where transmission is allowed between physical connection points, e.g., as if a working path is failed, and by specified the specific points of backup connection would confirm standby path, emphasis added}.

C/. Applicant argued that Nagata does not teach performing a path test for the entire interval or a certain interval with respective to the active or standby path.

In reply, Nagata does teach performing a path test for the entire interval or a certain interval (periodically, col.3, lines 43–46; col.6, lines 38–40; col.7, lines 48–52) with respective to the active or standby path.

D/. Applicant argued that Akiyoshi does not teach checking an active path formed in a direction of a matched last receiving board at a receiving side terminal.

In reply, Akiyoshi does teach checking an active path formed in a direction of a matched last receiving board at a receiving side terminal {col.17, lines 46–54, by sending OAM on trunk line $\phi 1$ which connected first ATM node 1a (last receiving

board) and second ATM node 1b (receiving terminal), fig.1, thus the trunk link $\phi 1$ is the active path which its status was being checked by the OAM}.

E/. Applicant argued that Akiyoshi does not teach checking of an active path in the reverse direction of a data transmission direction.

In reply, Akiyoshi does teach checking of an active path in the reverse direction of a data transmission direction {col.18, lines 1-4; col.26, lines 21-23}. Also, applicant admitted in the last paragraph on page 16 that Akiyoshi does teach "checking an active path in the reverse direction of a data transmission direction".

F/. Applicant argued that Akiyoshi does not teach performing a path test with respect to the set of standby set.

In reply, Akiyoshi does teach performing a path test with respect to the set of standby set {fig.39, s1202; fig.40, s1301; fig.48, s1702-s1704; fig.49, s1801-s1803}

12. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, THIS ACTION IS MADE FINAL. See

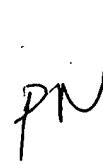
MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.


13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phuongchau Ba Nguyen whose telephone number is 703-305-0093. The examiner can normally be reached on Monday-Friday from 10:00 a.m. to 3:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu can be reached on 703-308-6602. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9314 for regular communications and 703-872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-4700.



Phuongchau Ba Nguyen
Examiner
Art Unit 2665



STEVEN H.D. NGUYEN
PRIMARY EXAMINER